

QCD Meeting 7/11/02

Special guest lecture

W/Z + jets and other processes in MCFM; color flows and comparisons to ME and MC generation John Campbell

1. News/announcements Jay/Joey

1. **on Aug 22, Pino Marchesini will talk at the QCD meeting on some new Run 2 QCD measurement proposals
2. short off-week meeting next Thurs; no meeting in 2 weeks

Run 2

2. Update on inclusive jets 15'
Frank Chlebana
3. Thoughts on b jet cross sections 10'
Joey Huston
2. 4. Update on photon analyses 30'
Petra Merkel
5. Jet shapes and energy distributions in Run 2 30'
(pre-blessing) Mario Martinez

Run 1

6. Update on photon cross section from conversions
Carter Hall 20'
7. NLO 3 jet production Sally Seidel 20'
(blessing)

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July 11, 2002

Papers of the Week

- I [hep-ph/0206293](#); ALPGEN, a generator for hard multiparton processes in hadronic collisions. M. Mangano, M. Moretti, F. Piccinini, R. Pittau, A. Polosa; This paper presents a new event generator, ALPGEN, dedicated to the study of multiparton hard processes in hadronic collisions. The code performs, at the leading order in QCD and EW interactions, the calculation of the exact matrix elements for a large set of parton-level processes of interest in the study of the Tevatron and LHC data. The current version of the code describes the following final states: $(W \rightarrow e \nu) Q \bar{Q} + N \text{ jets}$ and $(Z/\gamma^* \rightarrow l \bar{l}) Q \bar{Q} + N \text{ jets}$ (Q being a heavy quark), with $N \leq 4$; $(W \rightarrow e \nu) + N \text{ jets}$ and $(Z/\gamma^* \rightarrow l \bar{l}) + N \text{ jets}$ ($N \leq 6$); $nW + mZ + lH + N \text{ jets}$, with $n+m+l+N \leq 8$ and $N \leq 3$; $Q \bar{Q} + N \text{ jets}$ ($N \leq 6$); $Q \bar{Q} Q' \bar{Q}' + N \text{ jets}$, with Q and Q' heavy quarks (possibly equal) and $N \leq 4$; $H Q \bar{Q} + N \text{ jets}$ ($N \leq 4$). Parton-level events are generated, providing full information on their colour and flavour structure, enabling the evolution of the partons into fully hadronised final states.

Papers of the week

- [hep-ph/0207067](#); Update of MRST Parton Distributions; Authors: R.S. Thorne, A.D. Martin, R.G. Roberts, W.J. Stirling; We discuss the latest update of the MRST parton distributions in response to the most recent data. We discuss the areas where there are hints of difficulties in the global fit, and compare to some other updated sets of parton distributions, particularly CTEQ6. We briefly discuss the issue of uncertainties associated with partons.

Talks at Amsterdam

- Photon + Jet Physics from CDF
 - ◆ Jay Dittmann
- Heavy Flavor Production at CDF
 - ◆ Christoph Paus